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In Reply Refer To:
1792/1730 (IDB030)

October 23, 2014

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

NOTICE OF FIELD MANAGER'S FINAL DECISION

ARS South Mountain Juniper Research

Dear Interested Public:

The Bureau of Land Management's (BLM) Owyhee Field Office (OFO) in conjunction with Agriculture Research Services (ARS) recently completed the Environmental Assessment (EA) (42 USC §4321) process for the ARS South Mountain Juniper Research project. In support of the EA process, an interdisciplinary team (IDT) of BLM and ARS resource management specialists analyzed and summarized available data to identify resource issues and evaluate the proposed action.

Through the EA process, the IDT identified minor negative cumulative impacts of grazing on vegetation, watershed and soils, but overall negligible and some positive cumulative impacts of fire suppression, wood cutting, and recreation on the resources analyzed in the EA.

The decision to implement juniper treatment is in accordance with the 1999 Owyhee Resource Management Plan (ORMP). This Decision is being made in light of comments made through the EA review process and will provide rationale as to why I, the Authorizing Official, am making the decision. In accordance with the EA, this Decision authorizes juniper treatments as outlined in Section 2.3.2 of that document.

-BACKGROUND-

Western juniper (*Juniperus occidentalis* var. *occidentalis*) currently dominates over 3.6 million hectares (nearly 9 million acres) of rangeland in the northern Great Basin sagebrush steppe. Although western juniper is a native species (its native range includes parts of California, Washington, Oregon, and Idaho), over 90% of the current distribution represents expansion from

pre-settlement habitat (USDA Forest Service 1981; Gedney et al.1999; Miller et al. 1999; Johnson 2005; Miller and Tausch 2001). Western juniper historically inhabited rimrock or shallow, rocky outcrops; however, it has expanded beyond these areas into mountain big sagebrush and other mountain shrub communities.

Since 2007, ARS has monitored four basins in the Cabin Creek watershed of South Mountain for weather inputs, streamflow, suspended sediment, snow accumulation and melt, and western juniper distribution. Juniper treatments in these four basins, as well as a fifth treatment area of dense juniper affecting snow distribution into the treatment basins, would include 458 acres BLM land and 272 acres private land (730 acres total) of incremental treatment over the next 5-10 years. The BLM's goal is to use landscape scale juniper treatment that mimics natural processes, specifically girdling/cutting and prescribed fire to remove 100% of juniper from these watersheds, thereby creating conditions necessary for ARS to conduct this research. This project provides the BLM an opportunity to eliminate Phase III juniper from a small area on South Mountain as well as benefit from ARS's research, which will be valuable for future project planning and landscape planning needs.

Initial scoping for ARS South Mountain Juniper Research EA # DOI-BLM-ID-B030-2013-0009-EA was April 15, 2013 to May 15, 2013 and produced two responses. One response was in favor of juniper treatments and the other suggested an alternative which is discussed in the EA Section 2.2 Alternatives Considered but Not Analyzed in Detail. Internal review of the EA with the Owyhee Field Office, IDT members, ARS, and BLM NEPA specialists occurred from May 2014 to August 2014. The public was notified of the Draft EA September 4, 2014 with a twenty day comment period ending September 24, 2014. There were four responses which are addressed in Section 5.1 of the EA, Public Comments. In addition to adding Section 5.1, the only change to the EA due to public comment was the addition of the research design ARS intends to implement as an Appendix.

Finding of No Significant Impact (FONSI)

A Finding of No Significant Impact (FONSI) was signed on October XX, 2014, and concluded that the ARS South Mountain Juniper Research is not a major federal action that will have a significant effect on the quality of the human environment, individually or cumulatively with other actions in the general area. Therefore, an environmental impact statement is not required. A copy of the FONSI for EA # DOI-BLM-ID-B030-2013-0009-EA is available on the web at:

https://www.blm.gov/epl-front-office/eplanning/projectSummary.do?methodName=renderDefaultProjectSummary&projectId=36158

Therefore, it is my Final Decision to implement the following juniper treatments within the ARS South Mountain Juniper Research project area.

-FINAL DECISION-

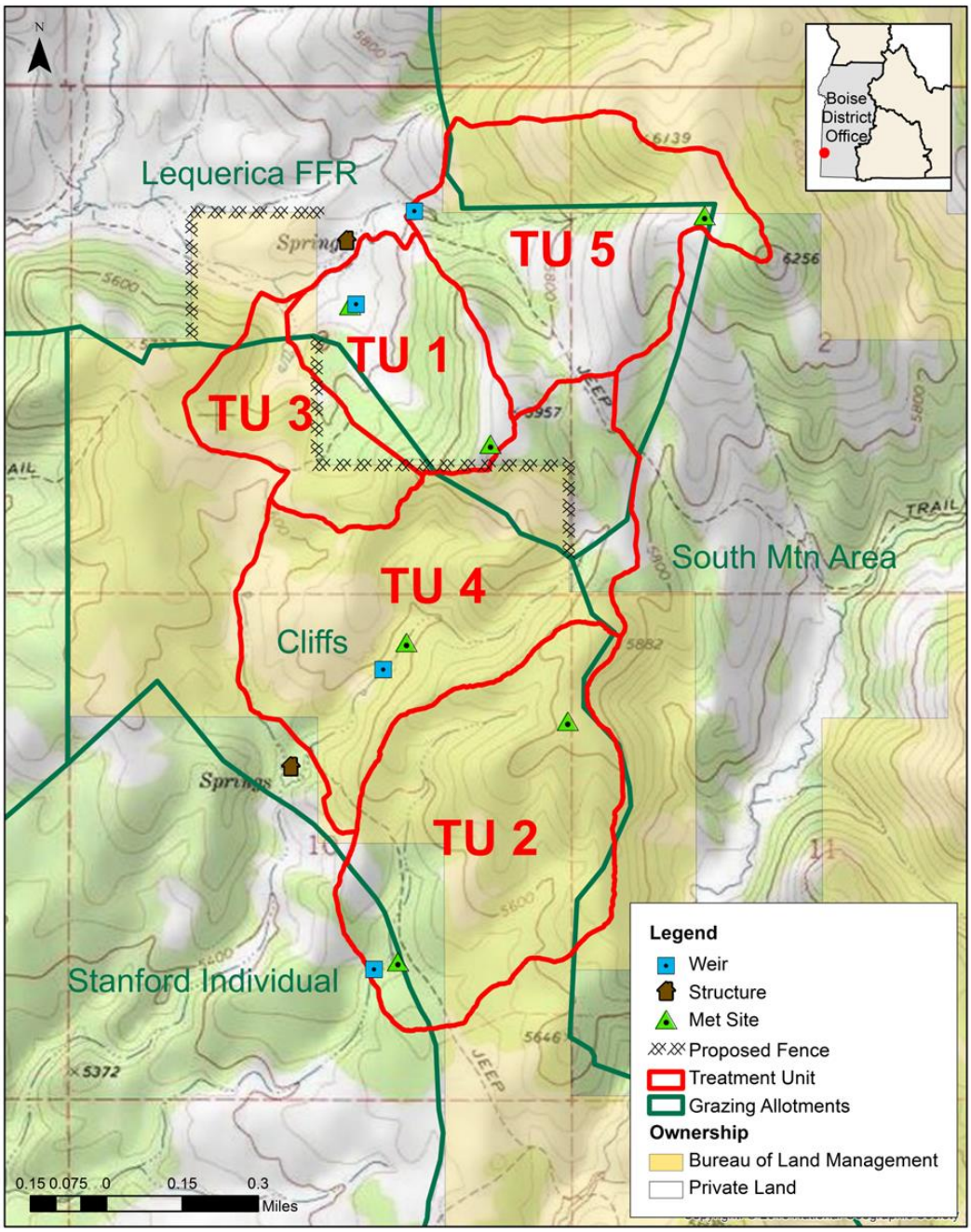
In accordance with the ORMP, and upon my review of EA # DOI-BLM-ID-B030-2013-0009-EA, I have determined that the western juniper treatments identified in the ARS South Mountain Juniper Research project would benefit BLM managers by providing valuable landscape scale research findings with the potential to influence future land management decisions concerning

juniper encroachment. It is my final decision as the authorized officer to implement the following treatments and Standards Operating Procedures (SOPs):

Treatments

The study area is divided into 5 Treatment Units (TU) encompassing four basins in the Juniper Creek watershed and one treatment unit (TU3) adjacent to the study basin boundaries that may have an impact on snow drift accumulation inside the study area (Map 2). Treatment Unit 3 is an area of dense trees comprised primarily of Phase III juniper.

Map 2 - Proposed Fenceline and Treatment Units



Identical juniper treatments are proposed for all four basins and TU3 for a total of five treatment units. Implementation of the treatment would require 2 to 3 years in each treatment unit. Juniper treatments would be initiated one treatment unit each year, successively over 7 to 10 years. The sequence in which each treatment unit is initiated would be staggered to minimize the possibility of burning one unit adjacent to a unit that was recently cut and could be receptive to spot fires.

Site preparation of each treatment unit would be identical. Because of the lack of continuous ground fuels or herbaceous and shrub understory throughout the project area, unit preparation consists of cutting and girdling juniper stands within the respective treatment areas. The combination of cutting and girdling provides a fuel layer that is receptive to ignition, can carry fire into tree crowns, and generally limits (controls) where prescribed fire will burn in denser stands of junipers. Cutting consists of felling trees 6 inches in diameter at breast height (DBH). Trees greater than 6 inches DBH would be girdled which consists of limbing trees to shoulder height and girdling around the bowl of the tree to sever the cambium. Girdling prevents the need for felling the larger trees, thereby reducing ground fuel loading to a treated area, and resulting in less soil heating when the slash is burned. Girdling is also less visually intrusive than felling as girdled trees look as though they were naturally killed by fire, drought, or beetles.

Once treatment units are cut and girdled, units will be allowed to dry for a period of time (generally 5-12 months depending on weather) to ensure fuels are dry enough to carry fire. Prescribed burning would be carried out in spring or early fall (September to October) with the option of black lining the unit prior to the prescribed broadcast burn. Black lining entails burning a buffer within the unit along the control line. The purpose of a black line is to reduce fuels through burning so that the main prescribed fire does not burn as intensely along the control lines, thus creating more favorable holding conditions for fire crews. See Broadcast Burning Standard Operating Procedures below.

Due to the mosaic nature of fire not all juniper trees within the units would be killed during the burning process and any live trees remaining would have to be girdled or felled to ensure 100% mortality. In the years following the prescribed burn there may be a need to limb or remove standing juniper trunks remaining after the burn which have the potential to impact the snow distribution within the watershed thus affecting the results of ARS's research.

Standard Operating Procedures (SOPs) for ARS South Mountain Juniper Treatments
Hand Cutting and Girdling Treatments

- Pre-burn juniper felling, cutting branches or girdling would be used to increase surface fuels where needed to carry fire.
- Undercarriages of ATV/UTVs would be cleaned before entering the treatment units to reduce the introduction of noxious weed seed.
- Pickups and larger vehicles associated with cutting treatments as well as support vehicles would be restricted to established roads and trails.
- Trees would be cut to a stump height of eight inches or less.
- No live branches would remain on the stump after the juniper tree is cut.
- Cutting crew camp locations would be pre-approved by the Authorized Officer.
- Any new raptor nests discovered during treatment activities would be reported within 24 hours by phone or E-mail to the Owyhee Field Office Wildlife Biologist. Protection of

these nest sites will be handled on a case-by-case basis and decision to proceed will be made by the Authorized Officer.

- Maintenance activities consisting of hand cutting young juniper that come in after the initial cutting, girdling, and/or broadcast burning treatments may occur.
- Identified National Register of Historic Places (NRHP) eligible archaeological sites found within the cutting areas will be treated in a manner that does not adversely affect their NRHP eligibility characteristics. Acceptable treatment options within archeological sites will be made in consultation with the Idaho SHPO and approved by the Authorized Officer.

Broadcast Burning

- To minimize heat and smoke exposure to fire holding crews, existing natural and human made fire breaks would be used where possible. While minimizing ground disturbance that would result from establishing new control lines, there may be situations that require the use of dozer or hand line for portions of the control lines. These sections would be limited to locations away from the weirs so as to not impact the sedimentation and hydrological aspects of the ARS research.
- On short portions of existing roads, dozers or graders may be needed to clean out vegetation which could compromise the roads usefulness as firelines, and to improve small portions of these roads which may be inaccessible to vehicles associated with burning efforts. No widespread road grading is anticipated nor is the use of this equipment outside of existing roads.
- Pretreatment by fire crews would involve appropriate measures to protect the four weirs located at the bottom of each watershed, the six remote weather stations that are located throughout the entire project area, and the two private cabins located in close proximity to the control lines of TU1 and TU4 to prevent damage to these sites (see Map 2). Specific resources needing additional protection are addressed in their respective sections.
- Fire engines, dozers, support vehicles, and ATV/UTVs would be used to contain the fire within control lines. Travel would be restricted to existing trails when possible, but may require some off-road travel.
- In accordance with BLM prescribed fire policy, a contingency area is proposed outside the burn perimeters to act as a buffer should a fire burn outside the perimeters (see Map 1). If this happens, the fire would be suppressed in the contingency area and burning operations could then continue in the treatment area.
- The undercarriage of all vehicles involved in the prescribed burn would be cleaned before traveling to the project area to reduce the introduction of noxious weed seed. Additionally, increased weed treatments would occur on known sites within broadcast burn areas.
- Burning would be conducted in accordance with the Idaho-Montana Airshed Group guidelines. Permission from the Airshed group is required prior to ignition to ensure local air quality standards would be met.

Wildlife

- New fences would be marked in accordance with current specifications identified in IM No. ID-100-2011-001 (USDI BLM 2011) and guidelines specified in BLM IM 2012-043

(USDI BLM 2012) to reduce collisions by sage-grouse and impacts to other wildlife species.

- Pretreatment fire crews would consult the Owyhee Field Office Wildlife Biologist to determine appropriate measures in order to prevent disruptive activities to raptor nests. The BLM field office manager can grant an exception to seasonal restrictions in cases where the nest has been destroyed (e.g., by wind, lightning, wildfire), is currently inactive, based on raptor species and variations in nesting chronology, topographic features (e.g., intervening ridge between treatment activities and nest), or other factors that are biologically reasonable. For instance, because nesting raptors may be shielded from disturbance by vegetation and/or topographic features, buffer areas may be individually developed and modified based on 3D analytical methods and/or landscape features (e.g., viewshed analysis, physiographic barriers such as cliffs and canyons).
- Broadcast burning would not be conducted within BLM-stipulated buffer zones of active raptor nests during the breeding season unless adjustment of the buffer is applicable based on a biologically reasonable exception as identified in the pretreatment SOP above. Buffer zones would be dependent on species, seasonal timing restrictions, and nest site activity status (See Table 1– Raptor Timing and Buffer Stipulations below).

Table 1. Raptor Timing and Buffer Stipulations

Species	Timing[1]	Breeding Season Nest Site Buffer (miles)[2]
Bald Eagle	Feb 1 – July 31	0.5 – 1.0
Peregrine Falcon	Feb 1 – July 31	1.0
Feruginous Hawk	Feb 1 – July 31	1.0
Golden Eagle	Feb 1 – July 31	0.5
Northern Goshawk	Feb 1 – July 31	0.5
Prairie Falcon	Feb 1 – July 31	0.5
Red-tailed Hawk	Feb 1 – July 31	0.33
Swainson's Hawk	Feb 1 – July 31	0.25
Burrowing Owl	Feb 1 – July 31	0.25

[1]Indicates timeframes for prohibiting broadcast/blackline burning and hand cutting/girdling around nest sites with active breeding attempts or until dispersal of young.
[2]Buffers apply to nest sites with active breeding attempts.

- Any new raptor nest discovered during treatment activities would be reported within 24 hours by phone or E-mail to the Owyhee Field Office Wildlife Biologist. Protection of these nest sites will be handled on a case-by-case basis.

- Spring burning (black lining) would be implemented prior to nesting of migratory birds, which would be determined by a wildlife biologist.
- NRHP eligible archeological sites with combustible features would be protected during the deployment of prescribed fire by reducing vegetation within and around the sites, black-lining resources and use of appropriate ignition techniques. Fire engines, dozers, support vehicles and UTV/ATVs will not be allowed to drive on or through any site unless it is on an existing road. The Fuels Archaeologist will review burn plans prior to project implementation.

-RATIONALE-

Through a cooperative relationship between BLM and ARS this project intends to provide research findings with the potential to influence future land management decisions regarding western juniper encroachment. The location of the study within the Owyhee Mountains provides significant relevance for future management practices addressing the vast amount of juniper encroachment prevalent in Southwest Idaho. Additional BLM cooperators are interested in addressing juniper expansion in the Owyhee Mountains particularly with regards to protecting and improving sage-grouse habitat.

Hand cut/girdling is an effective method for controlling large juniper trees, especially in dense juniper stands. Girdling prevents the need for felling the larger trees, thereby reducing ground fuel loading in a treated area, and resulting in lower soil temperatures when the slash is burned. Girdling is less visually intrusive than felling, as girdled trees look as though they were naturally killed by fire.

Late stage juniper expansion results in a loss of the herbaceous component (Miller et al. 2000) of the upland shrub-steppe ecosystem. The objectives of the juniper treatments are to restore and maintain the native shrub steppe, aspen, and riparian communities of this area, as well as study the hydrological response of these vegetation communities to juniper removal. Additionally, proposed juniper treatments will allow for improved watershed functionality. Although forage is expected to increase as a result of juniper treatments, alternatives were not developed or analyzed with the expectation of increasing livestock use.

SOPs identified are required in order to ensure attainment of the treatment and management objectives while ensuring the protection of fire crews, the general public, and to mitigate any negative impacts to vegetative, wildlife, or cultural resources.

-AUTHORITY-

Authority under which this decision is being issued is found in Title 43 of the Code of Federal Regulations (CFR) Subpart 4.410 – Appeals to the Board of Land Appeals.

-RIGHT of APPEAL-

Any applicant, permittee, lessee, or other interested publics may appeal a final decision under Sec. 43 CFR 4.410, 4.411, 4.412, and 4.413 in person or in writing to Michele McDaniel, Acting

Owyhee Field Office Manager, at 20 First Avenue West, Marsing, Idaho 83639 within 30 days after receipt of such decision. The notice of appeal, if filed, must include a statement of reasons for the appeal, a statement of standing if required by 43 CFR 4.412(b), and any arguments the appellant wishes to make. The person/party must also serve a copy of the appeal on the Office of the Solicitor, Boise Field Solicitors Office, University Plaza, 960 Broadway Ave., Suite 400, Boise Idaho, 83706 and person(s) named [43 CFR 4.421(h)] in the CC: section of this decision. The Interior Board of Land Appeals must decide an appeal of this decision within 60 days after all pleadings have been filed, and within 180 days after the appeal was filed as contained in 43 CFR 4.416.

If you have any questions, please contact me at 208-896-5912.

Sincerely,

/s/ Michelle G. Ryerson

Michelle G. Ryerson
Acting Field Manager
Owyhee Field Office

cc: Juniper Treatment Mailing List

Literature Cited

Gedney, D.R., D.L. Azuma, C.L. Bolsinger, and N. McKay. 1999. Western Juniper in Eastern Oregon. USDA Forest Service General Technical Report NW-GTR-464. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station. 53 p.

Johnson, D.D. 2005. The influence of environmental attributes on temporal and structural dynamics of western juniper woodland development and associated fuel loading characteristics. M.S. Thesis, Oregon State University, Corvallis, OR.

Miller, R.F., R.J. Tausch, and W. Waichler. 1999. Old-growth juniper and pinon woodlands. In: S.B. Monsen, R. Stevens, R.J. Tausch, and R.F. Miller [compilers]. Proceedings: Ecology and Management of Pinon-juniper Communities within the Interior West. USDA Forest Service Proceedings RMRS-P-9; Ogden, UT: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. p. 375-384.

Miller, R.F., and R.J. Tausch. 2001. The role of fire in pinyon and juniper woodlands: a descriptive analysis. In: K.E.M. Galley, and T.P. Wilson [Eds.]. Proceedings of the Invasive Species: the Role of Fire in the Control and Spread of Invasive Species. Miscellaneous Publication no. 11; Tallahassee, FL: Tall Timbers Research Station. p. 15-30.

Miller, R. F., T. J. Sveljcar, and J. A. Rose. 2000. Impacts of western juniper on plant community composition and structure. Journal of Range Management 53:574-585.

USDA Forest Service, 1981. Atlas of United States Trees. Volume 1. Conifers and Important Hardwoods. USDA Forest Service Miscellaneous Publication No. 1146. U.S. Department of Agriculture, Forest Service.

USDI-BLM 1999. Owyhee Resource Management Plan. Lower Snake River District BLM. 206pp.